DOCUMENT RESUME

ED 187 833 CE 016 824

TITLE Adult Competency Education Kit. Basic Skills in Speaking, Math, and Reading for Employment. Part F. ACE Competency Based Job Descriptions: #20--Body Fender Mechanic; #21--New Car Get-Ready Person.

INSTITUTION San Mateo County Office of Education, Redwood City, Calif. Career Preparation Centers.

SPONS AGENCY California State Dept. of Education, Sacramento. Bureau of Adult Education.; Office of Education (DHEW), Washington, D.C.

PUB DATE Sep 77

NOTE 51p.; Parts of this document will not reproduce well due to poor print quality. For related documents see CE 016 828-836.

EDRS PRICE MF01/PC03 Plus Postage.

DESCRIPTORS Adult Basic Education; Adult Vocational Education; *Auto Body Repairers; *Auto Mechanics; Basic Skills; Behavioral Objectives; *Communication Skills; Competency Based Education; Employment Potential; Employment Qualifications; Evaluation Criteria; Job Performance; Job Skills; *Mathematics; *Occupational Information; Reading Skills

IDENTIFIERS Adult Competency Education Project; California (San Mateo County)

ABSTRACT

This third of sixteen sets of Adult Competency Education (ACE) Based Job Descriptions in the ACE kit contains job descriptions for Body Fender Mechanic and New Car Get-Ready Person. Each begins with a fact sheet that includes this information: occupational title, D.O.T. code, ACE number, career ladder, D.O.T. general educational developmental level, site(s) at which job can be observed, job requirements, and job description (D.O.T.) The following pages list twenty to forty competences (specific math and communicative activities) needed to function successfully in the occupation. Each competency is presented as (1) exact skill found to have been essential to the job during an on-site employee interview, (2) measurable instructional objective defining the skill (performance criterion, not job related), and (3) specific tasks with which to test a student's ability at the skill (the job-related performance criterion). (Instructional objectives match those in the ACE Taxonomy as indicated by a code identifying unit, item, and specific objective.) Skills that are prerequisite to the competencies are noted. (Additional job descriptions, kit manuals, and the project final report are also available in ERIC--see Note.) (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED187833

san mateo county office of education

San Mateo County Office of Education
333 Main Street
Redwood City, CA 94063
(415) 364-5600

Adult Competency Education kit

a project of the career preparation centers

BEST COPY AVAILABLE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

William K. Jennings

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

PART F

ACE COMPETENCY BASED JOB DESCRIPTIONS:

20 - Body Fender Mechanic
21 - New Car Get-Ready Person

BASIC SKILLS IN SPEAKING, MATH, AND READING FOR EMPLOYMENT

Products and Processes
Developed by the
Adult Competency Education Project
Director, Joe Cooney

CE 016 824

ADULT COMPETENCY EDUCATION KIT TABLE OF CONTENTS

ACE Final Report (CE 016 818)

PART A (CE 016 819)
Introduction to ACE Kit 1
Table of Contents 6
Flowchart of ACE Student Process 7
ACE Counseling Manual 9

PART B (CE 016 820)
ACE Job Analysis and Instruction Manual 99
Interview Form 169

PART C (CE 016 821)
Taxonomy of Instructional Objectives 181
How to Develop Instructional Materials 239
Bibliography 241
Student Competency Profiles 265
Student Assignment Sheets 269
Matrix of Academic Skills 317
ACE Slide/Tape Script 321

PART D (CE 016 822)
ACE COMPETENCY BASED JOB DESCRIPTIONS:
#2 - Child Care Attendant 333
#4 - Guard 349
#8 - Medical Assistant 365

PART E (CE 016 823)
#11 - Groundskeeper 381
#12 - Animal Keeper 405
#15 - Tire Repairperson 411
#16 - Muffler Installer 423
#17 - Garage Mechanic 439

PART F (CE 016 824)
#20 - Body Fender Mechanic 469
#21 - New Car Get-Ready Person 495

PART G (CE 016 825)
#22 - Refrigerator Mechanic 515
#24 - Motorcycle Repairperson 559

PART H (CE 016 826)
#25 - Household Appliance Mechanic 583
#26 - Lineworker 611
#27 - Painter Helper, Spray 633
#28 - Painter, Brush 641
#29 - Carpenter Apprentice 645

PART I (CE 016 827)
#30 - Roofer Apprentice 653
#31 - Pipefitter 669
#32 - Medical Supply Clerk 675
#33 - Stock Clerk 681
#35 - Warehouseman (Laborer, Stores) 711

PART J (CE 016 828)
Sales Core Job Description 723
#36 - Sales, Automotive Parts 737
(see also Sales Core Job Description 723)
#37 - Sales Clerk 757
(see also Sales Core Job Description 723)
#38 - Salesperson, Garden & Housewares 771
(see also Sales Core Job Description 723)
#39 - Salesperson, Women's Garments 785

PART K (CE 016 829)
#40 - Salesperson, Automobile 801
(see also Sales Core Job Description 723)
#41 - Salesperson, Men's Wear 819
(see also Sales Core Job Description 723)
#42 - Waiter/Waitress 833
#45 - Janitor 851
#46 - Porter 859
#48 - Pressing Machine Operator 871

PART L (CE 016 830)
#52 - Maid 879
#54 - Ticket Agent 899
#55 - Cosmetologist 905
#57 - Counterperson 923
#58 - Cook Helper 927
#59 - Kitchen Helper 943

PART M (CE 016 831)
#60 - Food Assembler 955
#61 - Injection Molder - Machine Operator 967
#62 - Data Entry Typist 985
#63 - Institutional Cook 1001
Office Core Job Description 1025
#64 - Clerk Typist 1041
(see also Office Core Job Description)

PART N (CE 016 832)
#65 - Typist I 1049
(see also Office Core Job Descrip. 1025)
#67 - Grocery Checker 1057
#68 - File Clerk 1065
#69 - Receptionist 1087
(see also Office Core Job Descrip. 1025)
#70 - Bank Teller 1091
#71 - Clerk, General Office 1105
(see also Office Core Job Descrip. 1025)

PART O (CE 016 833)
#72 - Ward Clerk 1111
#73 - Account Clerk 1141
#74 - Mail Handler (Messenger) 1167
#75 - Payroll Clerk 1181

PART P (CE 016 834)
#77 - Secretary 1199
(see also Office Core Job Descrip. 1025)
#78 - Keypunch Operator 1203
Assembly Worker Core Job Description 1213
#82 - Electronics Assembler 1223
(see also Assembly Worker Core 1213)
#83 - Printed Circuit Assembler 1237
(see also Assembly Worker Core 1213)
#84 - Micro Electronics Assembler 1247
(see also Assembly Worker Core 1213)
#85 - Chassis Assembler 1255
(see also Assembly Worker Core 1213)
#87 - Machinist Apprentice 1263

PART Q (CE 016 835)
#91 - Meat Cutter 1287

#92 - Shipping Clerk	1303
#93 - Long Haul Truck Driver	1325
#94 - Truck Driver - Light	1351

PART R (CE 016 836)

#95 - Bus Driver	1371
#98 - General Loader	1397
#99 - Forklift Operator	1425
#100 - Material Handler	1439

NOTE

JOB DESCKIPTION NUMBERS. ACE investigated 100 jobs and developed 68 of them into Competency Based Job Descriptions. The above 68 are numbered according to the original listing. The gaps are in the numbering only. This is a complete list of the ACE Competency Based Job Descriptions.

A.C.E. COMPETENCY BASED JOB DESCRIPTION 20

OCCUPATIONAL TITLE: BODY FENDER MECHANIC

COMPETENCY BASED JOB DESCRIPTION FACT SHEET

OCCUPATIONAL TITLE: BODY FENDER MECHANIC

D.O.T. CODE: 807.381 (4th Ed.: 807.381-010)

A.C.E. NUMBER: 20

CAREER LADDER:

FIRST LEVEL: Body Fender Apprentice

SECOND LEVEL: Body Fender Mechanic

THIRD LEVEL: Body Fender Shop Supervisor

D.O.T.'s GENERAL EDUCATIONAL DEVELOPMENT LEVEL: 3

SITE WHERE THE JOB CAN BE OBSERVED:

Balestra Pontiac
1039 El Camino Real
Redwood City, CA

The activity which is the subject of this report was supported in whole or in part by the U.S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

The Adult Competency Education Project
SAN MATEO COUNTY OFFICE OF EDUCATION
609 Price Ave., Redwood City, CA 94063
364-5600 Ext.

Number of annual jobs in San Mateo County: 40 This number is based upon the San Francisco-Oakland SMSA, U.S. Census Manpower projections and the quarterly employment security application record system reports on local San Mateo County Employment Development Department job opening activity.

Usual Entrance Requirements - Job application, informal interview.

JOB DESCRIPTION (DOT): Repairs damaged bodies and body parts of automobile vehicles, such as automobiles and light trucks. Examines damaged vehicles and estimates cost of repairs. Removes upholstery accessories, electrical and hydraulic window and seat operating equipment, and trim to gain access to vehicle body and fenders. Places dolly block against surface of dented area and beats opposite surface with hammer to remove dents. Fills depressions with solder or other plastic materials. Removes excessively damaged fenders, panels, and grills, using wrenches and cutting torch and attaches replacements by bolting or welding them in position. Straightens bent frames, using hydraulic jack and pulling device. Files, grinds, and sands repaired surfaces, using power tools and handtools. Refinishes repaired surface by painting with primer coat and sanding it smooth. Aims headlights, aligns wheels, and bleeds hydraulic brake system. May paint surfaces after performing body repairs and be designated AUTOMOBILE-BODY REPAIRMAN, COMBINATION.

THE ACADEMIC REQUIREMENTS FOR THE JOB OF

BODY FENDER MECHANIC

Below are listed first in general terms and then in specific competencies the math and communication activities which a person must typically be able to carry out to function successfully as a body fender mechanic.

The right-hand column lists the exact competencies found to have been essential to the job in our on-site employee interview. This column also notes the skills which are prerequisites to those competencies.

The middle column *states the skill in more general language. The controlled language of this column permits comparison of skills between occupations.

*The items in the middle column have been abstracted from an abbreviated version of the taxonomy of generic skills developed by Kawula, W.; and Smith, A. De W.; Generic Skills Handbook of Occupational Information, Training Research and Development Station, Prince Albert, Saskatchewan, 1975.

1A.3 Prerequisite to 3E.1 Read a given whole number less than ten million and write its name in words.

1A.4 Prerequisite to 3E.2 Write a whole number less than ten million given the word name of the number.

1B.1 Prerequisite to 3E.3 Perform addition of whole numbers given instructions such as:

What is the total of 8 and 5? 8 + 5 = _____;
8 plus 5 is _____;
Find the sum of 8 and 5;
Add 8 and 5;

8
+5.

1B.2 Prerequisite to 3E.3 Find the sum of a set of whole numbers of 1-5 digits including cases where carrying is required.

1C.1 Prerequisite to 3E.5 Perform multiplication of whole numbers given instructions such as:

6 times 2 is _____; 6 X 2 = _____;
Six two's are _____;
The product of 6 and 2 is _____;

6
X2.

1C.2 Prerequisite to 3E.5 Find the product of a given pair of whole numbers of which one number is up to five digits and the other number up to three digits.

2A.2 Prerequisite to 5D.4 Reduce a fraction to its simplest form (lowest terms).

2A.3 Prerequisite to 5D.4 Change improper fractions to mixed numbers and mixed numbers to improper fractions.

3E.1 Prerequisite to 22H.1 Read a given value less than $10,000,000.00 and write or state its name in words.

3E.2 Prerequisite to 22H.1 Write a value less than $10,000,000.00 given the word name of the amount.

3E.3 A BODY FENDER MECHANIC must be able to correctly total bills for automobile repair work.

To accomplish this task, the student must be able to add columns of dollars and cents values including amounts from $.01 to $9,999.99.

To demonstrate the ability to perform this task, the student will determine the total cost of: one right rear wing window at $14.95; one right rear taillight at $5.50; one 10" chrome window strip at $2.25; 1/2 pint primer at $1.98; 1/2 pint green paint at $6.75; and 3 hours labor at $27.00.

KEY: $58.43.

3E.4 A BODY FENDER MECHANIC must be able to ascertain the amount a customer will have to pay for repair work if he decides to exclude a service or item figured in the repair estimate.

To accomplish this task, the student must be able to subtract one amount of money from another with values up to $10,000.00.

To demonstrate the ability to perform this task, the student will determine the estimated cost of replacing a headlight and windshield and painting a car hood when the total estimate given for replacing the headlight ($6.95), windshield ($57.50), and front grille ($42.95), and painting the hood ($17.60) was $125.00 plus labor and tax.

KEY:$82.05 plus labor and tax.

3E.5 A BODY FENDER MECHANIC must be able to figure the cost for the replacement of several identical parts.

To accomplish this task, the student must be able to calculate the total cost of up to twenty-five items of equal value.

To demonstrate the ability to perform this task, the student will determine the total cost of replacing the headlights on 12 vandalized police cars at $6.95 per headlight.

KEY: $166.80.

4B.1 Prerequisite to 4C.1 Calculate a percent of a number of the following types:

5% of 170 =_____.
5.7% of 170 =_____.
5.7% of 17.43=_____.

4C.1 A BODY FENDER MECHANIC must be able to figure the total cost of repair work including sales tax.

To accomplish this task, the student must be able to solve a routine word problem involving the calculation of a percent of a number.

To demonstrate the ability to perform this task, the student will solve the following problem: Mr. Skidmore received an estimate on body work which was $112.00 plus labor and tax. The labor cost was $45.00, and the tax is to be figured at 6%. Mr. Skidmore brought $165.00 in cash. Is this enough to pay the bill?

KEY: No. He needs $166.42.

5B.9 Prerequisite to 5B.10 Write a mathematical expression relating the facts in a given problem and then simplify that expression.

5B.10 A BODY FENDER MECHANIC must be able to calculate the size and number of parts and equipment and make adjustments in the size of parts to fit a particular automobile.

To accomplish this task, the student, when given word problems appropriate to a selected occupation, must be able to select arithmetic functions to be performed; the order in which they are to be done; and obtain the required solution.

To demonstrate the ability to perform this task, the student will read that: a size 20 inch metal strip must be used to fit a 19 inch car body, allowing an extra 2 inches on each end for welding underneath the ends of the fender and allowing for a 1/2 inch welding seam: and determine what length strip must be welded onto the 20 inch strip to make the strip fit the need.

KEY: A 4" strip.

5C.1 Prerequisite to 5D.4 Identify comparisons of two numbers in forms such as a:b, "a is to b," or "a parts to b parts," as ratios.

5C.2 Prerequisite to 5D.4 State or write in simplest form (lowest terms) a ratio of two numbers or items in the form:

a. a:b; b. $\frac{a}{b}$.

5D.1 Prerequisite to 5D.4 Identify an equality of two ratios in the form of: a:b = c:d, $\frac{a}{b} = \frac{c}{d}$, "a is to b as c is to d," or "a parts to b parts is the same as c parts is to d parts," etc., as a proportion.

5D.4 A BODY FENDER MECHANIC must be able to mix paints to obtain a specific color.

To accomplish this task, the student must be able to solve a routine word problem involving the solution of a proportion.

To demonstrate the ability to perform this task, the student will determine the amount of Blue #35 to be added to 3 quarts of White #16 to obtain the color, Sky Blue, which is a 3:2 mixture of Blue #35 to White #16.

KEY: 1½ qts. or 1 qt. 1 pt. of Blue #35.

6D.1 A BODY FENDER MECHANIC must be able to mix liquids together such as paint and paint thinner.

To accomplish this task, the student must be able to add and subtract units of liquid measure including cases where re-grouping is required

To demonstrate the ability to perform this task, the student will determine that:

6 gallons + 5 quarts = 7 1/4 gallons or 7 gallons, 1 quart.

6D.3 A BODY FENDER MECHANIC must be able to measure and mix solutions such as paint and paint thinner.

To accomplish this task, the student must be able to measure liquid content or capacity of a container to within one unit of the scale on the measuring instrument.

To demonstrate the ability to perform this task, the student will use a pint size beaker to measure one and one half quarts of water.

6E.3 A BODY FENDER MECHANIC must be able to decide whether to lift parts to be worked on manually or with the aid of a hoist or hydraulic lift.

To accomplish this task, the student must be able to, from visual, kinesthetic, and tactile perception and with immediate subsequent feedback, estimate the weight of various items of different shape, size, and composition (e.g., chair, table, book) to within 20% of actual weight.

To demonstrate the ability to perform this task, the student will examine various items such as books, a telephone, a chair, a desk, etc., and estimate their weight to within 20% of their actual weight.

6F.3 A BODY FENDER MECHANIC must be able to position an automobile or part at a workable distance from the ground using a lift or hoist.

To accomplish this task, the student must be able to estimate the length, width, height, or distance between objects, to within 20% of actual measurement, in cases such as the following:

a. dimensions of a book, box, desk, room, or building;
b. distances up to 200 yards.

To demonstrate the ability to perform this task, the student will estimate the dimensions of: the classroom, a door, a table, and a book to within 20% of their actual dimensions.

6G.1 A BODY FENDER MECHANIC must be able to fill out a time card.

To accomplish this task, the student must be able to subtract 12-hour clock times including cases where borrowing is required.

To demonstrate the ability to perform this task, the student will state the number of hours of work that have been done by a mechanic who arrives at 8:30 A.M. and leaves at 2 P.M. with no lunch break.

KEY: 5½ hours.

6G.2 A BODY FENDER MECHANIC must be able to keep accurate records of the time spent on repair jobs so that labor costs can be determined.

To accomplish this task, the student must be able to measure the actual duration of time expended to perform routine functions, correct to within 5% of actual duration.

To demonstrate the ability to perform this task, the student will state the amount of time, to within 5% of the actual time, it takes him to complete an instructional task (a routine set of math problems or reading exercises).

6G.5 **Prerequisite to 6H.1** Multiply given units by time intervals (e.g., 3 people times 4 hours and 35 minutes.)

6G.6 **Prerequisite to 6H.1** Given hours of work and rates of work, calculate hours per week and hours per month.

6G.7 A BODY FENDER MECHANIC must be able to tell the customer what time he will be able to reclaim his automobile.

To accomplish this task, the student must be able to estimate the duration of time actually required to perform routine functions, to within 50% of the actual time.

To demonstrate the ability to perform this task, the student will estimate the time it takes to shower, dress, make coffee, and eat breakfast to within 50% of the actual time it takes him to complete these functions.

6H.1 A BODY FENDER MECHANIC must be able to calculate the labor cost of a repair job.

To accomplish this task, the student must be able to calculate total costs given unit costs for material, wage or salary rates for labor, the total number of items, the hours/days of work.

To demonstrate the ability to perform this task, the student will determine the total cost of the labor at $7.50 per hour on a repair job which a mechanic worked on from 1 P.M. to 3:30 P.M. Monday, 8:00 A.M. to 1 P.M. Tuesday, and 1 1/2 additional hours Wednesday morning.

KEY: $67.50.

8A.3 Prerequisite to 8A.5 Identify a series of consecutive whole numbers or multiples of whole numbers with or without equal subdivisions between numbers on a measuring device, as a graduated scale.

8A.4 Prerequisite to 8A.5 Write the size of the interval between:

a. numerals on a graduated scale.
b. subdivisions on a graduated scale.

8A.5 A BODY FENDER MECHANIC must be able to read gauges on tanks to insure the correct mixture of oxygen and acetylene.

To accomplish this task, the student must be able to write the measurement indicated on a sketch of a graduated scale:

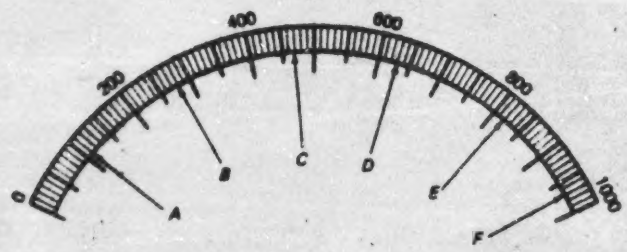
a. to the nearest whole number when the scale is marked off in consecutive whole numbers with or without subdivisions;

b. to a given precision when the scale is marked off in multiples of a whole number with or without subdivisions;

c. to a given precision when the scale is marked off in whole numbers with or without subdivisions representing fractions such as halves, quarters, eighths, sixteenths, tenths, or fifths;

d. to a given precision when the scale is marked off in whole numbers which represent multiples of a given number such as 100 or 1000.

To demonstrate the ability to perform this task, the student will determine the numbers represented by the arrows on this drawing of a gauge.



A____ B____ C____ D____ E____ F____

KEY: A-110, B-280, C-470, D-630, E-820, F-970.

12D.1 A BODY FENDER MECHANIC must be able to assemble and replace parts on vehicles.

To accomplish this task, the student must be able to identify the order in which parts are put together in an assembly drawing.

To demonstrate the ability to perform this task, the student will correctly answer the following questions on the drawing shown:

a. Which part/s fit through part #4?
b. What part screws onto the end of part #1.?
c. What goes through the hole in the front brake arm?
d. What do the spokes attach to?

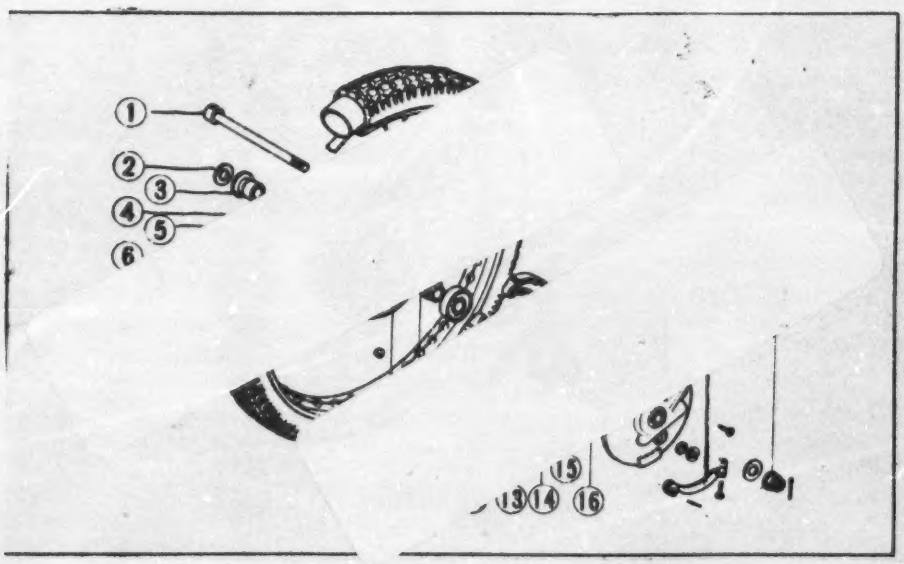


Fig. 5-1
① Front wheel axle
② 12mm plain washer
③ Front wheel side collar
④ 21X37X7 oil seal
⑤ 6301 radial ball bearing
⑥ Tire flap
⑦ Front wheel tube
⑧ Front wheel tire
⑨ Front wheel rim
⑩ Front wheel hub
⑪ Front axle distance collar
⑫ Front brake shoe
⑬ Brake shoe spring
⑭ 47X60X7 oil seal
⑮ Speedometer gear
⑯ Brake cam
⑰ Front brake panel
⑱ Front brake arm
⑲ Front wheel axle nut

KEY: a. (1) front wheel axle and (3) front wheel side collar,
b. (19) front wheel axle nut, c. (16) brake cam, d. (9) front wheel rim.

13A.1 Prerequisite to 15A.3 Given letters of the alphabet in manuscript form and in random order, read each letter and pronounce each letter correctly.

15A.1 Prerequisite to 15A.3 Read and use in an oral sentence words from a list of words common to the vocabulary of a given occupation.

15A.2 A BODY FENDER MECHANIC must be able to read and understand label instructions, directions and identifications on parts, in order to use the proper part for a particular job.

To accomplish this task, the student must be able to read words from labels of frequently used products or of products used in a given occupation.

To demonstrate the ability to perform this task, the student will read words to be defined in 15A.3 to the instructor.

15A.3 A BODY FENDER MECHANIC must be able to converse with customers and co-workers.

To accomplish this task, the student must be able to read and use words from a list of words common to the vocabulary of a given occupation.

To demonstrate the ability to perform this task, the student will match the following with 90% accuracy.

1. a clock with a mechanism for recording a timecard the time at which an employee begins and ends a work period
2. metal frame over the wheels on an automobile or other vehicle
3. an open car usually run on rails
4. body structure
5. a slight hollow made in a surface by blow or pressure
6. main front lights on a car
7. a device of tubes and fins, as in a motor vehicle, through which circulating water passes
8. to give a flat horizontal surface
9. a mixture of pigment with oil, water, etc.
10. a form which tells a mechanic to put certain designated parts in good condition.

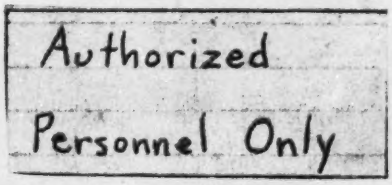
A. time clock
B. repair order
C. fender
D. dent
E. frame
F. radiator
G. head lamps
H. tram
I. to level
J. paint

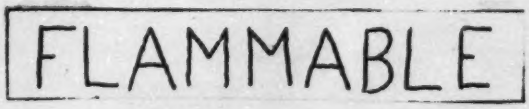
KEY: 1=A, 2=C, 3=H, 4=E, 5=D, 6=G, 7=F, 8=I, 9=J, 10=B.

15B.1 A BODY FENDER MECHANIC must be able to recognize restricted areas and observe safety regulations.

To accomplish this task, the student must be able to read aloud and explain a series of common functional signs (e.g., safety signs, road signs, etc.)

To demonstrate the ability to perform this task, the student will read aloud and explain the following signs:





16A.1 Prerequisite to 16A.4 Identify a form as a standardized printed document with blank spaces for recording certain needed information.

16A.2 Prerequisite to 16A.4 Interpret terminology and abbreviations frequently found in forms.

16A.3 Prerequisite to 16A.4 Identify various kinds of forms by stating the kind of information to be recorded.

16A.4 A BODY FENDER MECHANIC must be able to determine what work is to be done by reading a repair order.

To accomplish this task, the student, when given a variety of common business forms such as work orders, job orders, issue and receipt vouchers, claims and purchase orders, must be able to answer factual questions based on the data on the forms.

To demonstrate the ability to perform this task, the student will answer the following questions by referring to Exhibit 20-A:

a. How many hours of labor are estimated for repairing the rear bumper panel?
b. What company is doing the work?
c. What is the estimated sales tax?
d. What are the <u>category</u> headings of the 2 parts needed?

KEY: (a) 1.3, (b) Balestra Pontiac, (c) $4.88, (d) REAR and misc.

16B.1 Prerequisite to 16B.3 Describe the uses of charts and tables and define them as a visual way to give information in a compact and organized form.

16B.2 Prerequisite to 16B.3 State the type of information recorded on given charts or tables.

16B.3 A BODY FENDER MECHANIC must be able to read a paint chart in order to correctly mix specific colors.

To accomplish this task, the student, when given common reference tables and charts such as organization charts, parts charts, reference tables, including charts and tables designed in matrix form (rows and columns), must be able to answer factual questions based on the data supplied.

To demonstrate the ability to perform this task, the student will answer the following questions on Exhibit 20-B:

a. What base is used at a setting of 714 on Sunshine Yellow
b. How many bases are required for Rose Beige?
c. What setting would be used for base AT141 in mixing Charcoal Gray Irid.?

KEY: (a) AT 191, (b) 5, (c) 799.

484

16C.1 A BODY FENDER MECHANIC must be able to act on the basis of memos and bulletins received from supervisors.

To accomplish this task, the student, when given notes, letters, or memos, must be able to identify:

a. the author;
b. the recipient;
c. the activities required of the recipient;

and answer factual and interpretive questions from the contents.

To demonstrate the ability to perform this task, the student will refer to the memo below and answer the following questions:

a. Who sent this memo?
b. What was the labor charge on May 9?
c. An estimate of $21.00 for 3 hours labor was made for Mr. Luckless on May 1. The work was started yesterday and will be completed today (May 10). Will the estimate need to be changed?

memo

Jacopi's Auto Body Shop
321 California Drive
Burlingame

TO All employees

DATE May 10, 1977

FROM Anson Jacopi

SUBJECT increase in labor charge

Effective immediately, the charge for labor will increase from the current rate of $7.00 per hour to $7.50 per hour. This change should be reflected in all repair charges and estimates received by the business office for work begun on or after this date.

KEY: (a) Mr. Jacopi; (b) $7.00 per hour; (c) no.

16D.1 Prerequisite to 16D.4 Identify a manual as a handbook of instructions and/or information related to one topic, and give an example of a manual.

16D.2 Prerequisite to 16D.4 Identify the particular kind of information or directions included in a given manual, using the title, table of contents, and/or index guide.

16D.3 Prerequisite to 16D.4 Identify the parts of a given manual which apply to a given situation using the table of contents and/or index as a guide.

16D.4 A BODY FENDER MECHANIC must be able to locate parts in a manual and obtain information on them.

To accomplish this task, the student, when given a typical parts manual, must be able to locate a particular part and answer factual questions about its description (e.g., price, code number, vendor, etc.)

To demonstrate the ability to perform this task, the student will refer to Exhibit 20-C and answer the following questions:

a. What is the reference number for a rear apron to be put on Chassis No. 117 000 726?
b. What is the horsepower of the automobile model this apron will fit?
c. From what section of the parts manual does this page come?

KEY: (a) 111 813 30LM, (b) 53 H.P., (c) BODY or H.

16D.5 A BODY FENDER MECHANIC must be able to follow specific directions explained in technical service bulletins in order to make repairs, given an oral statement of the problem from a customer.

To accomplish this task, the student must be able to apply instructions or information from a given manual to a particular situation when given an oral description of a problem that can be solved using information from the manual.

To demonstrate the ability to perform this task, the student will read the paragraphs below and describe to the instructor the diagnostic procedure for a knock in a six-cylinder engine when the engine is idling.

ALL AMC CAR DEALERS
Some six-cylinder engines may produce a light to medium "knock" due to excessive connecting rod clearance, 0.0026 inch or more. The knock can be heard (when engine is not under load) at idle or when the car is coasting between 25 to 35 mph with the throttle closed. It may be less noticeable when the engine is cold than when it's hot, due to engine oil viscosity changes.
Replacing only connecting rod bearings with a clearance of 0.0026 inch or more will correct the knocking condition. Careful inspection and measurement of bearing clearance in accordance with the following procedures are recommended.

DIAGNOSIS PROCEDURE
If knock is evident at engine idle: Using insulated pliers, disconnect spark plug cables one at a time to isolate rod knock. With the wire disconnected, the noise should become less noticeable or stop completely at the cylinder (or cylinders) responsbile for the knock. Once the knock has been isolated, refer to repair procedure.

KEY: Remove spark plug cables one at a time using insulated pliers.

16D.6 A BODY FENDER MECHANIC must be able to read and understand a union agreement and insurance brochures.

To accomplish this task, the student must be able to answer factual questions based on the manual for items such as hours of work, rates of pay, vacation or other leave, grievances, promotion and discipline when given a typical company manual or union agreement containing administrative, policy, personnel and financial rules and regulations.

To demonstrate the ability to perform this task, the student will read the paragraph below and determine that chidren are removed from insurance coverage at age nineteen.

TERMINATION OF INSURANCE
Your insurance terminates at the end of the calendar month following the month in which you last worked 80 or more hours for a contributing employer. An individual dependent's insurance will terminate when he is no longer eligible. However, the death benefit of an employee's personal and dependent's Term Life Insurance will be paid as described on pages 8 and 9.

For a child, the insurance will terminate upon the earlier of marriage or attainment of age 19.

Insurance will terminate upon termination of the applicable Group Policy.

21A.3 Prerequisite to 22B.2 Given a date (day, month, date, year) write the date using correct punctuation and capitalization.

22A.1 Prerequisite to 22B.2 Given simple data in the form of words and figures, write phrases on forms which are legible and which convey the desired information.

22B.1 Prerequisite to 22B.2 Complete a sample application form for employment in a legible manner.

22B.2 A BODY FENDER MECHANIC must be able to apply for a job.

To accomplish this task, the student must be able to complete a sample application for a job in a legible manner.

To demonstrate the ability to perform this task, the student will fill out form 20-D accurately and legibly.

22B.7 A BODY FENDER MECHANIC must be able to fill out an Employee's Withholding Allowance Certificate.

To accomplish this task, the student must be able to complete provincial and federal government forms which are in current use for income tax, medical and hospital services, census, etc.

To demonstrate the ability to perform this task, the student will correctly fill out form below.

Form **W-4**
(Rev. April 1975)
Department of the Treasury
Internal Revenue Service

Employee's Withholding Allowance Certificate

(This certificate is for income tax withholding purposes only; it will remain in effect until you change it.)

Type or print your full name

Your social security number

Home address (Number and street or rural route)

Marital status
☐ Single ☐ Married
(If married but legally separated, or spouse is a nonresident alien, check the single block.)

City or town, State and ZIP code

1 Total number of allowances you are claiming . . . . . .

2 Additional amount, if any, you want deducted from each pay (if your employer agrees) . . . . . $

I certify that to the best of my knowledge and belief, the number of withholding allowances claimed on this certificate does not exceed the number to which I am entitled.

Signature ▶ ..... Date ▶ ....., 19.....

22H.1 A BODY FENDER MECHANIC must be able to fill out repair estimates.

To accomplish this task, the student, when given a typical business form, purchase order, job order, sales slip, and necessary data in words and figures, must be able to correctly complete or fill out the appropriate portions of the form.

To demonstrate the ability to perform this task, the student will correctly transfer the information contained in the following to the proper spaces on Exhibit 20-E:

Mrs. Helen Benson's '75 Pontiac Firebird sedan was hit while parked in front of her house at 75 B Street. The left taillight ($3.95) must be replaced. The left fender needs to be straightened and painted. The straightening will take about two hours. The painting will take an hour, and the paint will cost $7.50. Mrs. Benson has decided to get her entire car painted while it's in the shop. This will require 3 hours. Five times as much paint will be used for the entire car as would have been used for the fender.

26B.1 A BODY FENDER MECHANIC must be able to keep tools in their proper drawers and locate parts on the shelves.

To accomplish this task, the student, when given objects, must be able to sort by given classification criteria. The sorting should require a minimum of judgement. To oversimplify, sorting apples by types or tools by various generic classifications would be appropriate, but sorting apples by quality or lumber by grades is a rating skill.

To demonstrate the ability to perform this task, the student will sort a stack into the following groups:

a. non-red paperbacks 10" or more in length;
b. non-red hardbacks less than 10" in length;
c. all red books;
d. non-red paperbacks less than 10" in length;
e. non-red hardbacks 10" or more in length.

490

REPAIR ESTIMATE

20-A

CUSTOMER'S NAME A. OTT

INSURANCE CO.

ADDRESS 40 ARCH ST APT C

ADDRESS

CITY R.W.C. PHONE NO.

PHONE

AUTHORIZING ADJUSTER

MAKE OF CAR	YEAR	MODEL	BODY STYLE	MOTOR NUMBER	LICENSE NUMBER	MILEAGE	DATE
FIAT	72	F/B	2SPRT		239 DRO		11-11-74

SYMBOL	FRONT	LABOR HOURS	PARTS
	BUMPER		
	BUMPER BRKT.		
	BUMPER GD.		
	FRT. SYSTEM		
	FRAME		
	CROSS MEMBER		
	WHEEL		
	HUB CAP		
	HUB & DRUM		
	KNUCKLE		
	KNUCKLE SUP.		
	LR. CONT. ARM-SHAFT		
	UP. CONT. ARM-SHAFT		
	WINDSHIELD		
	TIE ROD		
	STEERING GEAR		
	STEERING WHEEL		
	HORN RING		
	GRAVEL SHIELD		
	PARK. LIGHT		
	GRILLE		
	MIRROR		
	HORN		
	BAFFLE, SIDE		
	BAFFLE, LOWER		
	BAFFLE, UPPER		
	LOCK PLATE, LR.		
	LOCK PLATE, UP.		
	HOOD TOP		
	HOOD HINGE		
	HOOD MLDG.		
	RAD. SUP.		
	RAD. CORE		
	RADIO ANTENNA		
	RAD. HOSE		
	FAN BLADE		
	WATER HOSE		

SYMBOL	LEFT	LABOR HOURS	PARTS
	FENDER		
	FENDER SHIELD		
	FENDER MLDG.		
	HEADLAMP		
	HEADLAMP DOOR		
	SEALED BEAM		
	COWL		
	DOOR, FRONT		
	DOOR LOCK		
	DOOR HINGE		
	DOOR GLASS		
	VENT GLASS		
	DOOR MLDGS.		
	DOOR HANDLE		
	CENTER POST		
	DOOR, REAR		
	DOOR GLASS		
	DOOR MLDG.		
	ROCKER PANEL		
	ROCKER MLDG.		
	SILL PLATE		
	FLOOR		
	FRAME		
	DOG LEG		
	QUAR. PANEL		
	QUAR. MLDG.		
	QUAR. GLASS		
	REAR		
	BUMPER		
N	REAR PANEL	1.3	43.80
	BUMPER BRKT.		
	BUMPER GD.		
	GRAVEL SHIELD		
	LOWER PANEL		
	FLOOR		
PAINT	TRUNK LID		
	TRUNK LOCK		
	TRUNK HANDLE		
	TAIL LIGHT		
	TAIL PIPE		
	GAS TANK		
	FRAME		
	WHEEL		
	HUB & DRUM		

SYMBOL	RIGHT	LABOR HOURS	PARTS
	FENDER		
	FENDER SHIELD		
	FENDER MLDG.		
	HEADLAMP		
	HEADLAMP DOOR		
	SEALED BEAM		
	COWL		
	DOOR, FRONT		
	DOOR LOCK		
	DOOR HINGE		
	DOOR GLASS		
	VENT GLASS		
	DOOR MLDGS.		
	DOOR HANDLE		
	CENTER POST		
	DOOR, REAR		
	DOOR GLASS		
	DOOR MLDG.		
	ROCKER PANEL		
	ROCKER MLDG.		
	SILL PLATE		
	FLOOR		
	FRAME		
	DOG LEG		
	QUAR. PANEL		
	QUAR. MLDG.		
	QUAR. GLASS		
	MISC.		
	INST. PANEL		
	FRONT SEAT		
	FRONT SEAT ADJ.		
	HEADLINING		
S	TOP	1.0	—
	TIRE		
	BATTERY		
N	PAINT DECK, LFT 'V' BACK PANEL, ROOF	7.5	37.50

TOTALS	HRS.	PARTS

The above is an estimate, based on our inspection, and does not cover additional parts or labor which may be required after the work has been opened up. Quotations on parts and labor are current and subject to change.

EST. MADE BY Lou

AUTHORIZATION FOR REPAIR. You are hereby authorized to make the above specified repairs to the car described herein.

SIGNED _____ DATE _____

Parts	$ 82.30
Sales Tax	$ 4.58
Labor	$ 166.60
Sublet	$
ESTIMATE TOTAL	$ 252.72
Advanced Charges	$
GRAND TOTAL	$

27

20-B

Substitute Paint Cart from Auto Repair Manual

Substitute chart from Auto Repair Manual

20-D

EMPLOYMENT APPLICATION

1. NAME (Last) (First) (Middle)

2. ADDRESS (Number, Street, City, Zip Code) 3. TELEPHONES
Home
Business

Length of Time at Current Address | Time at Previous Address

QUESTIONS 4 THROUGH 10 MUST BE ANSWERED *YES* OR *NO*

	YES	NO
4. Do you have a valid California Drivers License?		
5. Do you claim Veteran's Preference? If *Yes*, complete the following and submit copy of DD214 with application. (Veteran's Preference is applicable to entry level positions, only.) SERVICE DATES From ____ To ____ **NOTE:** To receive credit you must have served at least 30 days in the United States Armed Forces in time of war, or national emergency declared by the President of the United States of America, and have been discharged or released under conditions other than dishonorable.		
6. May we contact your present employer as to your qualifications, character and ability?		
7. Have you ever been dismissed from employment or resigned to avoid dismissal for misconduct or unsatisfactory service? (If *Yes*, give details in Question 11)		
8. Have you ever received Workman's Compensation? (If *Yes*, describe in Question 11)		
9. Have you any disease, nervous disorder, physical disability or infirmity? (If *Yes*, describe in Question 11)		
10. Have you been hospitalized for any reason in the past five years? (If *Yes*, describe in Question 11)		

11 Explanations to questions 7 through 10 (Use additional sheets of paper, if necessary.)

12 **EDUCATIONAL RECORD**

Circle Highest Grade Completed 8 7 8 9 10 11 12 | Name and Location of Last Elementary or High School | Graduated? Yes ☐ No ☐

Name and Location of College or University | Major | Credits or Degree

List any related business, trade, special training (give location and dates); estimated typing and shorthand speeds; San Mateo County typing and/or shorthand certificates (give certificate number and date); location of college placement file; and other related information as applicable.

13. **EMPLOYMENT INFORMATION** (Begin with your present employment and work back. Account for all time during the past ten years, including periods of unemployment. In addition, please describe any other related work experience, including volunteer work. Use additional sheets if more space is required.)

Present or Last Position

Employer
Address
Supervisor's Name & Title ____ Phone ____
Your Title
Duties

From ____ mo. ____ year
To ____ mo. ____ year
Total ____ years ____ months
Full Time ☐ Part Time ☐
Last Salary
Reason for leaving

Employer
Address
Supervisor's Name & Title ____ Phone ____
Your Title
Duties

From ____ mo. ____ year
To ____ mo. ____ year
Total ____ years ____ months
Full Time ☐ Part Time ☐
Last Salary

14. **PERSONAL REFERENCES - GIVE THREE** (Do not include previous employers or relatives.)

NAME	ADDRESS	PHONE NUMBER

494

REPAIR ESTIMATE

20-E

CUSTOMER'S NAME

INSURANCE CO.

ADDRESS

ADDRESS

CITY

PHONE NO.

PHONE

AUTHORIZING ADJUSTER

MAKE OF CAR	YEAR	MODEL	BODY STYLE	MOTOR NUMBER	LICENSE NUMBER	MILEAGE	DATE

SYMBOL	FRONT	LABOR HOURS	PARTS
	BUMPER		
	BUMPER BRKT.		
	BUMPER GD.		
	FRT. SYSTEM		
	FRAME		
	CROSS MEMBER		
	WHEEL		
	HUB CAP		
	HUB & DRUM		
	KNUCKLE		
	KNUCKLE SUP.		
	LR. CONT. ARM SHAFT		
	UP CONT ARM SHAFT		
	WINDSHIELD		
	TIE ROD		
	STEERING GEAR		
	STEERING WHEEL		
	HORN RING		
	GRAVEL SHIELD		
	PARK. LIGHT		
	GRILLE		
	MIRROR		
	HORN		
	BAFFLE, SIDE		
	BAFFLE, LOWER		
	BAFFLE, UPPER		
	LOCK PLATE, LR.		
	LOCK PLATE, UP.		
	HOOD TOP		
	HOOD HINGE		
	HOOD MLDG.		
	RAD. SUP.		
	RAD. CORE		
	RADIO ANTENNA		
	RAD. HOSE		
	FAN BLADE		
	WATER HOSE		

SYMBOL	LEFT	LABOR HOURS	PARTS
	FENDER		
	FENDER SHIELD		
	FENDER MLDG.		
	HEADLAMP		
	HEADLAMP DOOR		
	SEALED BEAM		
	COWL		
	DOOR, FRONT		
	DOOR LOCK		
	DOOR HINGE		
	DOOR GLASS		
	VENT GLASS		
	DOOR MLDGS.		
	DOOR HANDLE		
	CENTER POST		
	DOOR, REAR		
	DOOR GLASS		
	DOOR MLDG.		
	ROCKER PANEL		
	ROCKER MLDG.		
	SILL PLATE		
	FLOOR		
	FRAME		
	DOG LEG		
	QUAR. PANEL		
	QUAR. MLDG.		
	QUAR. GLASS		
	REAR		
	BUMPER		
	BUMPER BRKT.		
	BUMPER GD.		
	GRAVEL SHIELD		
	LOWER PANEL		
	FLOOR		
	TRUNK LID		
	TRUNK LOCK		
	TRUNK HANDLE		
	TAIL LIGHT		
	TAIL PIPE		
	GAS TANK		
	FRAME		
	WHEEL		
	HUB & DRUM		

SYMBOL	RIGHT	LABOR HOURS	PARTS
	FENDER		
	FENDER SHIELD		
	FENDER MLDG.		
	HEADLAMP		
	HEADLAMP DOOR		
	SEALED BEAM		
	COWL		
	DOOR, FRONT		
	DOOR LOCK		
	DOOR HINGE		
	DOOR GLASS		
	VENT GLASS		
	DOOR MLDGS.		
	DOOR HANDLE		
	CENTER POST		
	DOOR, REAR		
	DOOR GLASS		
	DOOR MLDG.		
	ROCKER PANEL		
	ROCKER MLDG.		
	SILL PLATE		
	FLOOR		
	FRAME		
	DOG LEG		
	QUAR. PANEL		
	QUAR. MLDG.		
	QUAR. GLASS		
	MISC.		
	INST. PANEL		
	FRONT SEAT		
	FRONT SEAT ADJ.		
	HEADLINING		
	TOP		
	TIRE		
	BATTERY		
	PAINT		
	TOTALS	HRS.	PARTS

The above is an estimate, based on our inspection, and does not cover additional parts or labor which may be required after the work has been opened up. Quotations on parts and labor are current and subject to change.

EST. MADE BY

AUTHORIZATION FOR REPAIR. You are hereby authorized to make the above specified repairs to the car described herein.

SIGNED DATE

Parts	$
Sales Tax	$
Labor	$
Sublet	$
ESTIMATE TOTAL	$
Advanced Charges	$
GRAND TOTAL	$

A.C.E. COMPETENCY BASED JOB DESCRIPTION 21

OCCUPATIONAL TITLE: NEW-CAR GET-READY PERSON

FACT SHEET

ACE COMPETENCY BASED JOB DESCRIPTION

OCCUPATIONAL TITLE: NEW-CAR GET-READY PERSON

D.O.T. CODE: 806.381 (4th Ed.: 806.361-026)

ACE NUMBER: 21

CARREER LADDER:

FIRST LEVEL:
- Service Station Mechanic
- Muffler Mechanic
- Tire Repairman
- Service Station Attendant

SECOND LEVEL:
- New Car Get-Ready Person

THIRD LEVEL:
- Diesel Mechanic
- Shop Foreman
- Service Manager
- Aviation Mechanic

D.O.T.'s Level of General Educational Development:

SITE WHERE THE JOB CAN BE OBSERVED:
Putnam Buick, Inc.
50 California Dr.
Burlingame, CA.

Number of Annual Jobs in San Mateo County: 79. This number is based upon the San Francisco-Oakland SMSA, U.S. Census Manpower projections and the quarterly employment security application record system reports on local San Mateo County Employment Development Department job opening activity.

D.O.T. JOB DESCRIPTION: NEW-CAR GET-READY MAN (auto ser.) 806381, automobile make-ready mechanic. Inspects and services new automobiles on delivery to dealer and makes minor repairs or adjustments to place vehicle in saleable condition: Inspects vehicle for obvious damage and missing major components. Records discrepancies and signs acceptance slip for each vehicle delivered. Inspects vehicle for loose or misalined trim, doors, hardware, and other items, and corrects defects, using handtools. Starts engine. Activates power equipment, such as electric windows, seats and radio to detect faulty unit or system. Observes functioning of horn, lights, directional signals, cigarette lighter, and other electrical components. Washes car and vacuums interior. Observes minor chips or scratches in paint and touches up imperfections, using brush applicator and factory-supplied matching paint. Installs optional equipment specified by customer or dealer, such as outside mirrors, rugs and seat covers. Installs standard components, such as hubcaps and wiper blades removed before shipment or during storage. Installs antifreeze solution seasonally. Polishes car to remove preservative coating and road film accumulated during transit. May spray undercoating materials onto underside of vehicle. May tune engine, using mechanics' tools and test equipment. May install or repair major mechanical, hydraulic or electromechanical equipment such as radios, air conditioners, power-steering units, and power brakes.

THE ACADEMIC REQUIREMENTS FOR THE JOB OF

NEW-CAR GET-READY PERSON

Below are listed, first in general terms and then in specific competencies, the math and communication activities which a person must typically be able to carry out to function successfully as a new car get-ready person.

The right hand column lists the exact competencies found to have been essential to the job in our on-site employee interview. This column also notes the skills which are prerequisite to the competencies.

The center column * states the skill in more general language. The controlled language of this column permits comparison of skills between occupations.

* The items in the left hand column have been abstracted from an abbreviated version of the taxonomy of generic skills developed by Kawula, W. and Smith, A. De W., Generic Skills Handbook of Occupational Information, Training Research and Development Station, Prince Albert, Saskatchewan, 1975.

These materials were developed pursuant to a grant from HEW, OE under PL93-380, Section 309. This does not necessarily imply endorsement of the content.

1A.1 A NEW-CAR GET-READY PERSON must be able to read numbers on work orders and part orders and be able to copy them on a work summary.

To accomplish this task, the student must be able to read and copy whole numbers.

To demonstrate the ability to perform this task, the student will copy the part number from the following key to lubricants:

	KEY TO LUBRICANTS	Part No.*
AA	Automatic Transmission Fluid, AQ-ATF, Suffix "A"	1843314
CC	Carburetor Cleaner	2933500
DCL	Cam Lubricant	1473395
EO	Engine Oil	
GL	Gear Lubricant (Drum) (All standard Axles)	2585317
HL	Hypoid Lubricant (Qt.) (Sure-Grip 7 ⅛", 8 ¾" and Standard axles)*	2933565
SGL	Sure-Grip Lubricant (9 ¼" and 9 ¾" Sure-Grip)	2585318
HTF	High Temperature Brake Fluid	2421352
MML	Multi-Mileage Lubricant	2525035
MP	Multi-Purpose Gear Lubricant	
MPG (2-EP)	Multi-Purpose Grease, NLGI Grade 2 EP	
PSF	Power Steering Fluid	2084329
S	Manifold Heat Control Valve Solvent	2525054

*See Alternate Specifications in Individual Paragraphs.

1A.5 A NEW-CAR GET-READY PERSON must be able to recognize that sufficient parts are on hand to do a job.

To accomplish this task, the student must be able to count screws, nuts, and bolts.

To demonstrate the ability to perform this task, the student will count a stack of papers and record the number counted.

1B.1 Prerequisite to 3B.2

Perform additions of whole numbers given instructions such as:

What is the total of 8 and 5? 8 + 5 = ____
Find the sum of 8 and 5.
8 plus 5 is ____ 8
Add 8 and 5. +5

1B.3 Prerequisite to 3B.2

Perform subtraction of whole numbers given instructions such as:

8 minus 5 is _____.
Subtract 5 from 8.
Find the difference of 8 and 5.
8 - 5 = _____.

If you had 8 and gave away 5, you would have _____.

$$\begin{array}{r} 8 \\ -5 \\ \hline \end{array}$$

1C.2 Prerequisite to 6G.6

Find the product of a given pair of whole numbers of which one number is up to 5 digits and the other number up to three digits.

3A.3 A NEW-CAR GET-READY PERSON must be able to read and understand tolerances and use tools whose sizes are designated in decimal fractions.

To accomplish this task, the student must be able to understand the relative value of decimal fractions.

To demonstrate the ability to perform this task, the student will state that A C D B is the ascending order of the following:

a. 0002
b. 04
c. 005
d. 009

3B.2 A NEW-CAR GET-READY PERSON must be able to test drive an auto and record the number of miles tested using odometer readings.

To accomplish this task, the student must be able to solve problems involving addition and/or subtraction of decimals.

To demonstrate the ability to perform this task, the student will determine that 4278.3 from 5489.2 is 1210.9 and that 4287.3 plus a test drive of 26.7 miles is 4305.0.

3C.1 Prerequisite to 6G.6

Calculate the product of two decimal fractions when rounding off is (a) not required and (b) required.

6D.2 A NEW-CAR GET-READY PERSON must be able to install anti-freeze solutions.

To accomplish this task, the student must be able to measure liquid volumes such as pints, quarts and gallons and know their relative capacities.

To demonstrate the ability to perform this task, the student will state the names of various size milk containers (e.g., pint, quart, half gallon), and answer that there are eight pints when asked how many pints there are in a gallon.

6E.3 A NEW-CAR GET-READY PERSON must be able to replace or install damaged or customer requested parts of various sizes and weights (e.g., mag wheels, power sterring units), and know if a mechanical lifting device such as a hoist will be needed in the installation.

To accomplish this task, the student must be able to estimate the weight of various items of different shapes, sizes and compositions.

To demonstrate the ability to perform this task, the student will estimate the weights of several objects around A.C.E. and decide whether they can be lifted without mechanical assistance. Instructor's judgment should serve as an adequate measure of student's competency.

6G.6 A NEW-CAR GET-READY PERSON must be able to calculate amounts per week given the hours of work and rates of work.

To accomplish this task, the student must be able to calculate amounts per week given hours of work and rates of work.

To demonstrate the ability to perform this task, the student will determine that:

10 days at $7.00 per day = $70.00
9 days at $8.50 per day = $76.50
3½ days at $8.00 per day = $28.00

6G.7 A NEW-CAR GET-READY PERSON must be able to estimate the time it will take to complete a job in order to tell a supervisor and/or customer the approximate time a car will be ready.

To accomplish this task, the student must be able to estimate the actual duration of time expended to perform a routine function.

To demonstrate the ability to perform this task, the student will estimate the time it takes to travel to the ACE project office from the student's home.

8A.5 A NEW-CAR GET-READY PERSON must be able to read common diagnostic equipment when testing an automobile's performance.

To accomplish this task, the student must be able to read graduated scales.

To demonstrate the ability to perform this task, the student will determine that the following measurements are correct:

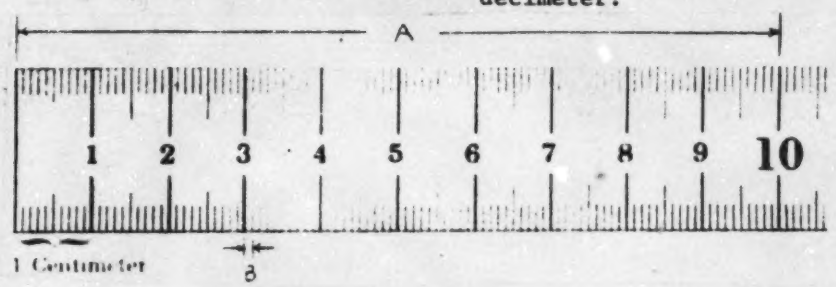
The length of the line XZ.
a. to the nearest inch is 4
b. to the nearest ½ inch is 4
c. to the nearest ¼ inch is 3 3/4 or 4
d. to the nearest 1/8 inch is 3 7/8.

9A.1 A NEW-CAR GET-READY PERSON must be able to use the proper metric tools or measurements when working on foreign cars.

To accomplish this task, the student must be able to identify metric measure and their relative values.

To demonstrate the ability to perform this task, the student will examine the meter stick below and determine that:

Distance A = 1 decimeter or 10 centimeters, or 100 millimeters.
Distance B = 1 millimeter or 1/10 of a centimeter, or 1/100 of a decimeter.



12D.1 A NEW-CAR GET-READY PERSON must be able to assemble replacement or additional equipment parts.

To accomplish this task, the student must be able to read assembly drawings.

To demonstrate the ability to perform this task, the student will determine that since the assembly in 21-A has been completed to the locking ring, then the next part to be added is the flange and screw assembly.

12E.1 A NEW-CAR GET-READY PERSON must be able to install such items as radios and air conditioners.

To accomplish this task, the student must be able to read schematic drawings.

To demonstrate the ability to perform this task, the student will trace the rear clutch to pump subsystems in 21-B.

13A.1 Prerequisite to 16A.4

Given letters of the alphabet in manuscript form and in random order, read each letter and pronounce each letter correctly.

13A.2 Prerequisite to 16A.4

Given the letters of the alphabet in manuscript form and in random order, read each letter correctly in the proper alphabetical order.

15A.1 A NEW-CAR GET-READY PERSON must be able to communicate with customers, skilled mechanics and sales personnel.

To accomplish this task, the student must be able to read and understand commonly used automotive terms.

To demonstrate the ability to perform this task, the student will read and become familiar with the following list of terms and abbreviations:

work order	m.m	H.P.
overtime	F.O.B.	cyl.
flat rate	m.p.g.	hrs.
tolerances	m.p.h.	No.
manual	R.P.M.	Emp. No.
service procedures	A.C.	Oper. No.
diagnosis	D.C.	
trouble shoot	pos.	
specifications	neg.	
wear	A.T.F.	
pressure	S.A.E.	
tongue	cu. in.	
vacuuming	Qts.	

15A.3 A NEW-CAR GET-READY PERSON must be able to converse with customers and co-workers.

To accomplish this task, the student must be able to understand the occupational vocabulary.

To demonstrate the ability to perform his task, the student will match the following with 90% accuracy.

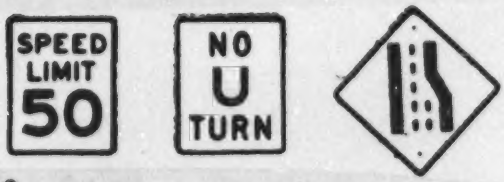
A. subscription	1. describes an internal combustion engine in which air is compressed to a temperature sufficiently high to ignite fuel injected into the cylinder where the combustion actuates a piston.
B. carburetor	2. a device to deaden noise
C. circuit	3. a branch of science that deals with water or other liquid in motion.
D. alignment	4. largely or wholly involuntary.
E. tire balance	5. the complete path of an electric current including user. The source of electric energy.
F. adjustment	6. forms a subordinate or constituent part of a whole system.
G. diesel	7. a device inserted in the head of an internal-combustion engine cylinder that itnites the fuel mixture by means of an electric spark.
H. automatic	8. to make slippery
I. hydraulics	9. a condition of adaptation
J. muffler	10. use of weight to counteract wobble due to imperfections in tires or wheels.
K. spark plug	11. arrangement or position in a straight line.
L. lubricate	12. a device used in gasoline engines to produce an efficient explosive vapor of fuel and air.

Key: A-6, B-12, C-5, D-11, E-10, F-9, G-1, H- 4, I-3, J-2 , K- 7, L-8

15B.1 A NEW-CAR GET-READY PERSON must be able to test drive new or repaired vehicles.

To accomplish this task, the student must be able to read functional road signs.

To demonstrate the ability to perform this task, the student will read the encircled road signs and explain their meanings as "speed limit: 50", "no U turn" and "road narrows".



16A.1 A NEW-CAR GET-READY PERSON must be able to fill out forms pertaining to the job.

To accomplish this task, the student must be able to recognize forms and know how to fill them out.

To demonstrate the ability to perform this task, the student will complete the job application, 21-D accurately and legibly.

16A.2 Prerequisite to 15A.1

Interpret terminology and abbreviations frequently found in forms.

16A.4 A NEW-CAR GET-READY PERSON must be able to carry out written instructions and keep records of work done and time spent.

To accomplish this task, the student must be able to fully understand customer work orders, time cards and other forms.

To demonstrate the ability to perform this task, the student will fill out 21-D for the previous week.

16D.4 A NEW-CAR GET-READY PERSON must be able to locate information in service manuals.

To accomplish this task, the student must be able to use the table of contents and/or index to find sections or pages of the manual that have the desired information.

To demonstrate the ability to perform this task, the student will determine that in Appendix E General Engine Specifications for the 1953 Ford are on page 486.

16D.5 A NEW-CAR GET-READY PERSON must be able to diagnose problems and recommend or perform services that will insure customer satisfaction upon delivery of the new car.

To accomplish this task, the student must be able to find and use information given in an auto manual.

To demonstrate the ability to perform this task, the student will read the paragraphs below and explain to the instructor the four different problems with brakes and their causes.

TROUBLE SHOOTING

Substitute trouble shooting section

of any manual

...worn shoes, mounts, warped shoes, loose hold down springs, grease on the lining

...worn, ring pins, contacts sup... ports etc. Brake chatter can also be

Brake Pull

absorber

17A.1 Prerequisite to 17A.3

Select appropriate titles for paragraphs, given a list of titles.

17A.2 Prerequisite to 17A.3

Match a given list of main ideas to appropriate paragraphs.

17A.3 A NEW-CAR GET-READY PERSON must be able to understand the gist of sections of a manual.

To accomplish this task, the student must be able to pick out the main ideas expressed by the manual.

To demonstrate the ability to perform this task, the student will read the following information and determine that the main point is that improper installation of spark plugs is one of the biggest reasons for poor spark plug performance.

IMPORTANT

Improper installation of spark plugs is one of the greatest single causes of unsatisfactory spark plug performance. Improper installation is the result of one or more of the following practices: 1) Installation of plugs with insufficient torque to fully seat the gasket; 2) excessive torque which changes gap settings; 3) installation of plugs on dirty gasket seal; 4) installation of plugs to corroded spark plug hole threads.

Failure to install plugs properly will cause them to operate at excessively high temperatures and result in reduced operating life under mild operation or complete destruction under severe operation where the intense heat cannot be dissipated rapidly enough.

Always remove carbon deposits in hole threads before installing plugs. When corrosion is present in threads, normal torque is not sufficient to compress the plug gasket (if used) and early failure from overheating will result.

Always use a new gasket (if required) and wipe seats in head clean. The gasket must be fully compressed on clean seats to complete heat transfer and provide a gas tight seal in the cylinder. For this reason as well as the necessity of maintaining correct plug gap, the use of correct torque is extremely important during installation.

17A.7 Prerequisite to 19A.15

Do an exercise that requires recall of given instructions or information.

17A.10 A NEW-CAR GET-READY PERSON must be able to converse with co-workers about jobs.

To accomplish this task, the student must be able to put events in a logical order.

To demonstrate the ability to perform this task, the student will determine that given the following tasks for installing a radio, the order of their occurrence would be B, A, C:

A. Connect speaker and antenna leads;
B. Position radio under instrument panel and install the radio mounting bracket and attaching nuts;
C. Connect battery ground cable and test operation of radio.

19A.1 Prerequisite to 19A.3

Identify the correct meanings of words that sound similar but are different in meaning.

19A.2 Prerequisite to 19A.3

Write words which fit the context of given sentences.

19A.3 A NEW-CAR GET-READY PERSON must be able to understand instructions in order to do a job correctly and efficiently.

To accomplish this task, the student must be able to interpret the meaning of words using the context.

To demonstrate the ability to perform this task, the student will tell the instructor the meanings of the following underlined words in the sentences below:

a. If the contacts are misaligned, the distributor contacts will not meet the rotor.
b. The ballast resistor lowers the current when it is high, and raises the current when it is low.
c. If the brake system needs bleeding, one must remove all of the air bubbles from it.

19A.4 A NEW-CAR GET-READY PERSON must be able to take specific orders, general instructions and also, make independent judgments about the appropriateness of an activity.

To accomplish this task, the student must be able to state the main idea from a given statement of several sentences.

To demonstrate the ability to perform this task, the student will pick statement c below as the main idea of the following paragraph:

Superhighways make driving easier and safer. Cars going in opposite directions are separated from each other by a wide strip of ground. On some superhighways drivers never have to stop for a red light, since crossroads and railroads go under or over the road. These modern highways now link many sections of our nation.

The story mainly tells:
a. why there are no red lights on superhighways
b. How much superhighways cost
c. How superhighways make driving safer and easire
d. Where superhighways are found

19A.6 Prerequisite to 19A.4

Identify the main outsome expected from spoken directions.

19A.7 Prerequisite to 19A.4

State the main idea from a spoken statement of several sentences.

19A.10 A NEW-CAR GET-READY PERSON must be able to answer questions about work done based on information received from co-workers.

To accomplish this task, the student must be able to answer questions from oral information.

To demonstrate the ability to perform this task, the student will answer the following questions based on the paragraph below (to be read orally by the instructor):

Q. What are two types of abnormal tire wear patterns?
A. Over and under inflation.

Q. Where does the tire wear in these two cases?
A. Center/shoulders, respectively.

Q. Why do the tires wear in these two places?
A. Tire bows out at the center, thus lifting shoulders off the ground, or tire bows in at the center, forming an arch.

Underinflation

For the maximum results in stability and handling, ride quality and tire life, tire inflation pressures should not be allowed to go below the recommended inflation pressures. When a tire is underinflated, this results in much faster wear of the shoulders than the center of tread.

Overinflation

When tire inflation pressures are maintained withing the specifications the tire will wear evenly over the entire tread. A tire that is overinflated wears much faster in the center of the tread.

19A.12 Prerequisite to 19A.15

List directions that were given by a speaker.

19A.14 Prerequisite to 19A.10

Identify the correct order in which a number of events occurred, basing the order on a spoken description of the events.

19A.15 A NEW-CAR GET-READY PERSON must be able to perform jobs given by a supervisor.

To accomplish this task, the student must be able to follow oral instructions.

To demonstrate the ability to perform this task, the student will listen to the following instructions and then proceed to do them:

a. Remove all the pencils from the jar on the table.
b. Divide them up into three equal groups.
c. If there are any pencils left over from the three groups, replace them in the jar.

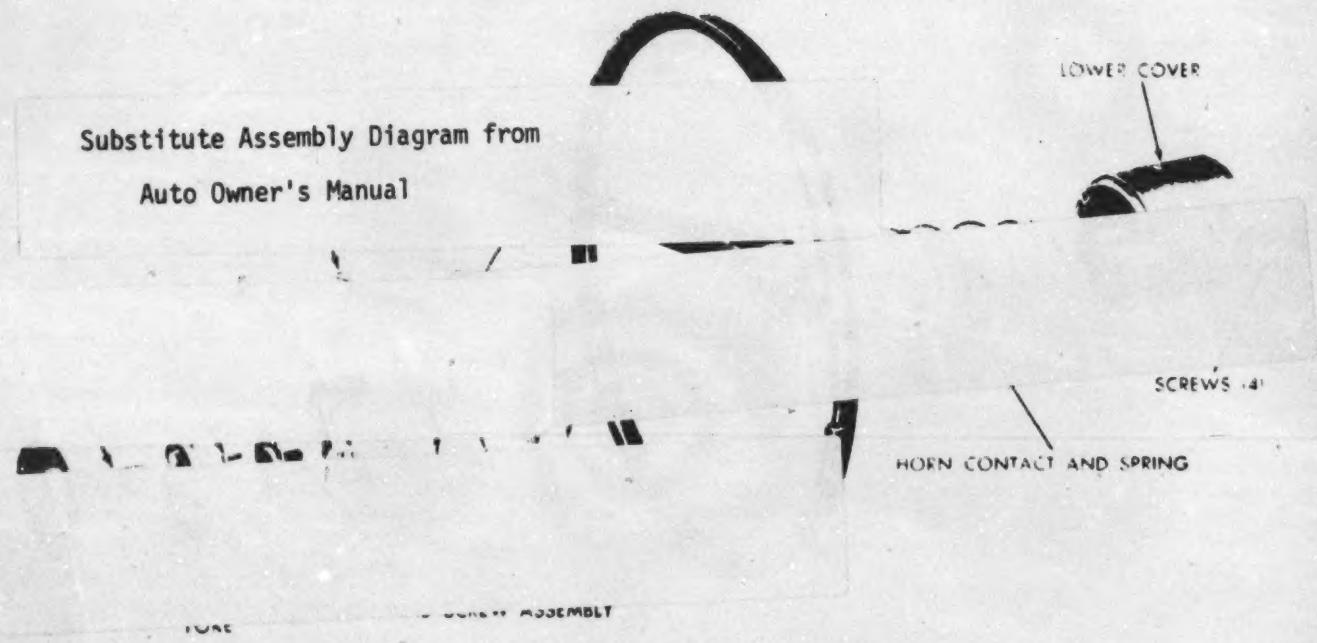
22A.1 Prerequisite to 16A.1

Given simple data in the form of words and figures, write phrases on form which are legible and which convey the desired information.

22B.1 Prerequisite to 16A.1

Given simple data in the form of words and figures, write complete sentences on forms which are legible and which convey the required information.

21-A



21-B

Substitute Diagram of Auto Transmission

21-C

EMPLOYMENT APPLICATION

1. **NAME** (Last) (First) (Middle)

2. **ADDRESS** (Number, Street, City, Zip Code)

3. **TELEPHONES**
Home _____
Business _____

Length of Time at Current Address | Time at Previous Address

QUESTIONS 4 THROUGH 10 MUST BE ANSWERED *YES* OR *NO*

	YES	NO
4. Do you have a valid California Drivers License?		
5. Do you claim Veteran's Preference? If *Yes*, complete the following and submit copy of DD214 with application. (Veteran's Preference is applicable to entry level positions only.) SERVICE DATES From _____ To _____ **NOTE**: To receive credit you must have served at least 30 days in the United States Armed Forces in time of war, or national emergency declared by the President of the United States of America, and have been discharged or released under conditions other than dishonorable		
6. May we contact your present employer as to your qualifications, character and ability?		
7. Have you ever been dismissed from employment or resigned to avoid dismissal for misconduct or unsatisfactory service? (If *Yes*, give details in Question 11)		
8. Have you ever received Workman's Compensation? (If *Yes*, describe in Question 11)		
9. Have you any disease, nervous disorder, physical disability or infirmity? (If *Yes*, describe in Question 11)		
10. Have you been hospitalized for any reason in the past five years? (If *Yes*, describe in Question 11)		

11 Explanations to questions 7 through 10 (Use additional sheets of paper, if necessary.)

12 **EDUCATIONAL RECORD**

Circle Highest Grade Completed
8 7 8 9 10 11 12

Name and Location of Last Elementary or High School

Graduated? Yes ☐ No ☐

Name and Location of College or University | Major | Credits or Degree

List any related business, trade, special training (give location and dates), estimated typing and shorthand speeds, San Mateo County typing and/or shorthand certificates (give certificate number and date), location of college placement file, and other related information as applicable.

13. **EMPLOYMENT INFORMATION** (Begin with your present employment and work back. Account for all time during the past ten years, including periods of unemployment. In addition, please describe any other related work experience, including volunteer work. Use additional sheets if more space is required.)

Present or Last Position

Employer
Address
Supervisor's Name & Title _____ Phone _____
Your Title
Duties

From _____ mo _____ year
To _____ mo _____ year
Total _____ years _____ months
Full Time ☐ Part Time ☐
Last Salary
Reason for leaving

Employer
Address
Supervisor's Name & Title _____ Phone _____
Your Title
Duties

From _____ mo _____ year
To _____ mo _____ year
Total _____ years _____ months
Full Time ☐ Part Time ☐
Last Salary

14. **PERSONAL REFERENCES GIVE THREE** (Do not include previous employers or relatives.)

NAME	ADDRESS	PHONE NUMBER

21-D

Here is a chart covering one week. Keep track of what you do with your time for one week by filling in the spaces. Write how and where you spend your time from 8:00 am to 6:00 pm each day.

Name _____ Week of _____

	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
8:00 am							
9:00 am							
10:00 am							
11:00 am							
12:00 noon							
1:00 pm							
2:00 pm							
3:00 pm							
4:00 pm							
5:00 pm							
6:00 pm							

21-E

Substitute page of Catalog Index